

## CLAIMS:

1. A method of noise filtering an image sequence ( $VI$ ), characterized in that the method comprises:
  - determining (11) statistics in at least one image of the image sequence ( $VI$ );
  - and
  - 5 calculating (14) at least one filtered pixel value ( $P_i'$ ) from a set of original pixel values ( $P_i, M_i$ ) obtained from the at least one image, wherein the original pixel values ( $P_i, M_i$ ) are weighted (13) under control ( $12, \alpha$ ) of the statistics (11).
2. A method as claimed in claim 1, wherein the step of calculating comprises:
  - 10 weighting (13) the set of original pixel values ( $P_i, M_i$ ) under control ( $12, \alpha$ ) of the statistics (11) to obtain a weighted set of pixel values ( $P_i, N_i$ ); and
  - furnishing the weighted set of pixel values ( $P_i, N_i$ ) to a static filter, in which static filter the at least one filtered pixel value ( $P_i'$ ) is calculated from the weighted set of pixel values ( $P_i, N_i$ ).
- 15 3. A method as claimed in claim 1, wherein the statistics (11) include a spatial and/ or temporal spread ( $S$ ) of the set of original pixel values ( $P_i, M_i$ ).
4. A method as claimed in claim 3, wherein the spatial and/ or temporal spread
  - 20 ( $S$ ) is a sum of absolute differences, a given absolute difference being obtained by subtracting an average pixel value from a given original pixel value ( $P_i, M_i$ ).
5. A method as claimed in claim 1, wherein the set of original pixel values ( $P_i, M_i$ ) include a central pixel value ( $P_i$ ) and spatially and/or temporally surrounding pixel
  - 25 values ( $M_i$ ), wherein as a result of the noise filtering, the central pixel value ( $P_i$ ) is replaced by the filtered pixel value ( $P_i'$ ).
6. A method as claimed in claim 2, wherein the set of weighted pixel values ( $P_i, N_i$ ) is obtained by taking for each pixel in the set of original pixels ( $P_i, M_i$ ), a combination

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of a portion  $\alpha$  of the original pixel value ( $P_i, M_i$ ) and a portion  $1-\alpha$  of a central pixel value ( $P_i$ ).

7. A method as claimed in claim 1,  
 5 wherein the statistics (11) are furnished to a look-up table (12), from which look-up table (12) a control signal ( $\alpha$ ) is obtained, which control signal ( $\alpha$ ) controls the weighting (13).
8. A method as claimed in claim 2,  
 10 wherein the at least one filtered pixel value ( $P_i'$ ) is obtained by calculating (14) a median of the weighted set of pixel values ( $P_i, N_i$ ).
9. A method as claimed in claim 2,  
 15 wherein the at least one filtered pixel value ( $P_i'$ ) is obtained by calculating (14) an average of the weighted set of pixel values ( $P_i, N_i$ ).
10. A method as claimed in claim 9, the method comprising:  
 determining (41) a spatial spread ( $S_{\text{spat}}$ ) calculated from spatially displaced original pixel values ( $P_i, M_i$ ) in the set of original pixel values ( $P_i, M_i, P_{i1}, P_{i2}$ );  
 20 determining (42) a temporal spread ( $S_{\text{temp}}$ ) calculated from temporally displaced original pixel values ( $P_i, P_{i1}, P_{i2}$ ) in the set of original pixel values ( $P_i, M_i, P_{i1}, P_{i2}$ );  
 and  
 weighting (46) the spatially displaced original pixel values ( $P_i, M_i$ ) under control (43) of the spatial spread ( $S_{\text{spat}}$ ) and the temporally displaced original pixel values  
 25 ( $P_i, P_{i1}, P_{i2}$ ) under control (44,45) of the temporal spread ( $S_{\text{temp}}$ ).
11. A method as claimed in claim 10, wherein the weighted temporally displaced original pixel values ( $WP_1, WP_2$ ) are divided (a) to lessen their weight in the filtering (47).
- 30 12. A method as claimed in claim 10, wherein the temporally displaced original pixel values include two original pixel values ( $P_{i1}, P_{i2}$ ) from different fields in a same frame ( $F_0$ ) and at least one original pixel value of a previous frame ( $F_{-1}$ ).

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13. A method as claimed in claim 12, wherein filtered temporally displaced pixel values are used rather than temporally displaced original pixel values.

14. A method of encoding (1) an image sequence ( $VI$ ), wherein the image  
5 sequence ( $VI$ ) is noise filtered according to a method as claimed in claim 1.

15. A device for noise filtering an image sequence, the device comprising:  
computing means (11) for determining statistics in at least one image of the  
image sequence ( $VI$ ); and  
10 filtering means (14) for calculating at least one filtered pixel value ( $P_i'$ ) from a  
set of original pixel values ( $P_i, M_i$ ) obtained from the at least one image, wherein the original  
pixel values ( $P_i, M_i$ ) are weighted (13) under control (12,  $\alpha$ ) of the statistics (11).

16. A device for encoding (1) an image sequence ( $VI$ ), the device comprising a  
15 device for noise filtering as claimed in claim 15.

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